Two New California Species of *Silis*[1]

(Coleoptera: Cantharidae)

KENNETH M. FENDER

Linfield Research Institute, McMinnville, Oregon 97128

The two species herein described as new to science, help confirm Green's hypothesis (1966) that numerous unrecognized species of *Silis* await discovery, especially from western North America.

In the genus *Silis*, the posterior angles of the pronotum are excised, retracting these angles and forming an anterior subangulate prominence called the anterior process. The excised portion is occupied by a projected portion of the hypomeron, called the posterior process. Both of these processes vary considerably in outline and are excellent for the recognition of species groups. In some instances they appear to be adequate for the recognition of species.

The characters for the determination of the species within the species groups are usually found in the aedeagus of the male. As Green (1966) has noted, a certain amount of variability in the aedeagae resulted in his recognition of some species complexes that he was unable to resolve. The attemped resolution of these is not yet possible.

Silis (Silis) spinigerula Fender, new species

(Figs. 1, 3–5)

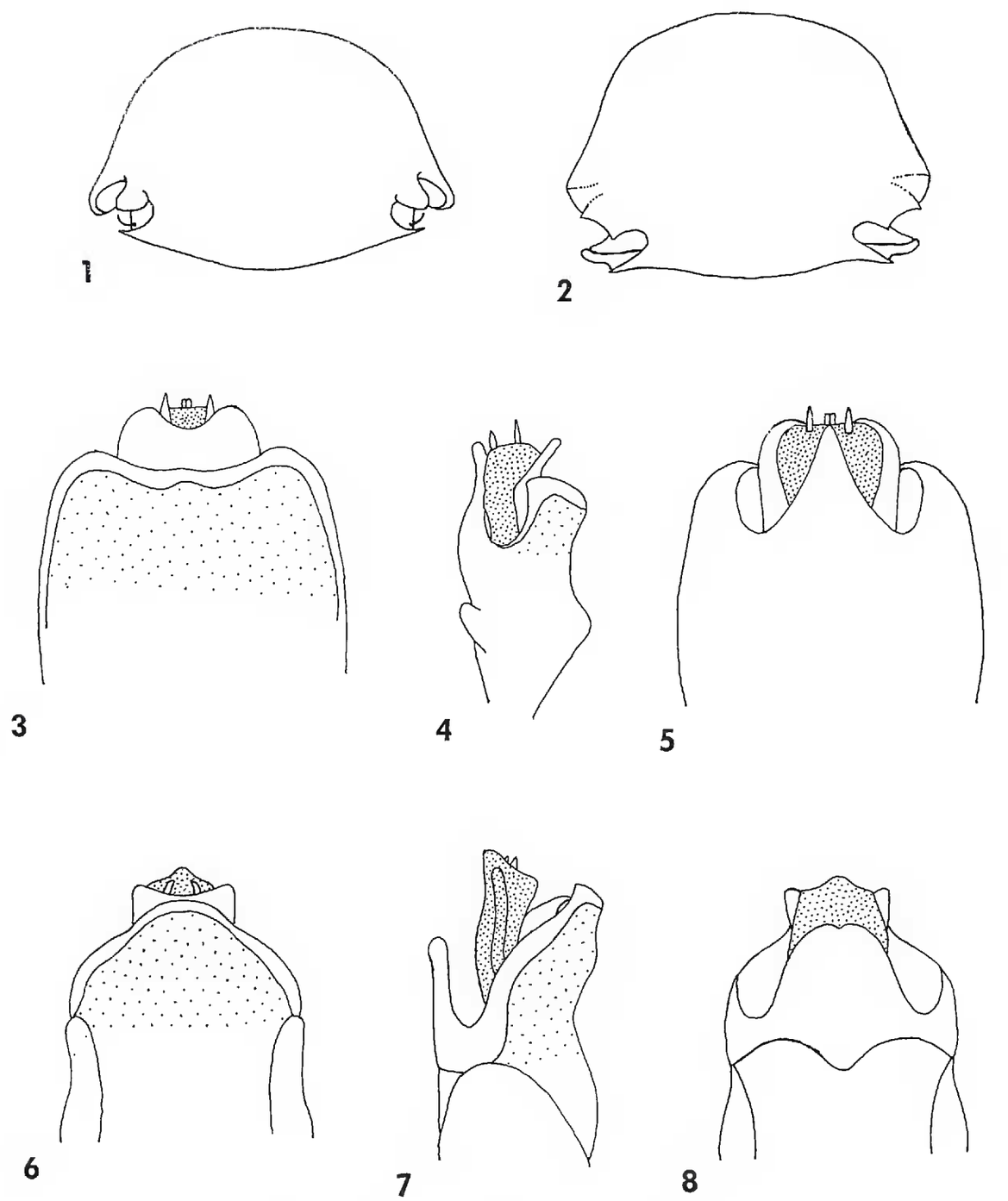
Black. Mandibles testaceous, becoming infuscate towards tips. Prothorax pale rufous. Pubescence piceous.

MALE.—Length 5 mm, length-width ratio 3.25 : 1. Antennae four-fifths length of body, moderately stout, subfiliform, becoming compressed apically, intermediate segments about three and one-half times as long as wide. Pronotum as in Fig. 1, anterior process of basal excisure bilobed, lobes rounded, posterior process produced as forward curving spiniform process, excision only partially closed by dorsal surface of extended hypomeron. Pubescence erect, fine, short and inconspicuous. Aedeagus. Dorsal plate broadly shallowly emarginate apically, without raised median lobe. Basophyses fused into broad subparallel-sided plate about half as wide as tegmen and with apex shallowly emarginate. Median lobe with two pair of apical spines; in dorsal or ventral views, lower pair abutting with tips blunt, upper pair remote with tips acute; in lateral view, both pairs acute.

FEMALE.—Unknown.

---

[1] This study was supported by National Science Foundation Grant: GB-6283X.



FIGS. 1, 3–5. *Silis* (*Silis*) *spinigerula*. FIG. 1. pronotum. FIG. 3. aedeagus of male, dorsal view. FIG. 4. same, lateral view. FIG. 5. Same, ventral view. FIGS. 2, 6–8. *Silis* (*Silis*) *alexanderi*. FIG. 2. pronotum. FIG. 6. aedeagus of male, dorsal view. FIG. 7. same, lateral view. FIG. 8. same, ventral view.

Holotype male, CAMPO LAKE ON MEXICAN BORDER, SAN DIEGO COUNTY, CALIFORNIA, 2 April 1963, 2,565 feet, collected by C. P. Alexander, in the collection of the California Academy of Sciences, San Francisco.

This species is most closely related to *S. filicornis* Van Dyke. That species differs in not having the anterior process of the basal excisure of the pronotum bilobed, having the pubescence decumbent and the

dorsal plate of the aedeagus with an apical raised and produced median lobe.

Silis (Silis) alexanderi Fender, new species

(Figs. 2, 6–8)

Black. Prothorax and head in front of antennae pale rufous; palpi black; basal two or three antennal segments testaceous beneath; head beneath pale rufous at gular sutures. Protibiae pale piceous to dark piceous. Apical angles of first four visible abdominal sternites narrowly testaceous. Pubescence cinereous.

MALE.—Length 4.75 to 5.25 (average 5) mm. Length-width ratio 2.75 : 1. Antennae filiform, about three-fourths length of body, intermediate segments three times as long as wide. Pronotum as in Fig. 2, excision of posterior angles of pronotum deep, rather narrow; posterior margin of anterior process with two spicules, outer spicule as produced posterior margin of posterolateral furrow, inner spicule simple; posterior process broad, subfoliate in outline. Aedeagus. Dorsal plate apically entire, rounded, becoming sinuate towards each side. Median lobe with an apical pair of short acute spines. Basophyses (lateral view) stout, evenly curved up and narrowing apically, not attaining margin of dorsal plate. Basal plate (ventral view) short and stout, apex shallowly notched.

FEMALE.—Normal, not recognizable unless taken in association with males.

Holotype male, allotype female and 13 male and 4 female paratypes: SEVEN OAKS, SAN BERNARDINO MOUNTAINS, SAN BERNARDINO COUNTY, CALIFORNIA, 21 May 1963, 5,000 feet, collected by C. P. Alexander, types in the collection of the California Academy of Sciences, San Francisco.

This species somewhat resembles the members of the *cava* group of *Silis*. In these, the anterior process of the basal excisure of the pronotum is simple, the posterior margin without spicules.

Named for the collector, C. P. Alexander, in appreciation of the many novelties that he has donated to my collection and the great interest that Mrs. Alexander and he have continually shown in my work.

LITERATURE CITED

GREEN, J. W. 1966. Revision of the Nearctic species of *Silis* (Cantharidae: Coleoptera). Proc. Calif. Acad. Sci., 32(16): 447–513, 65 figs.